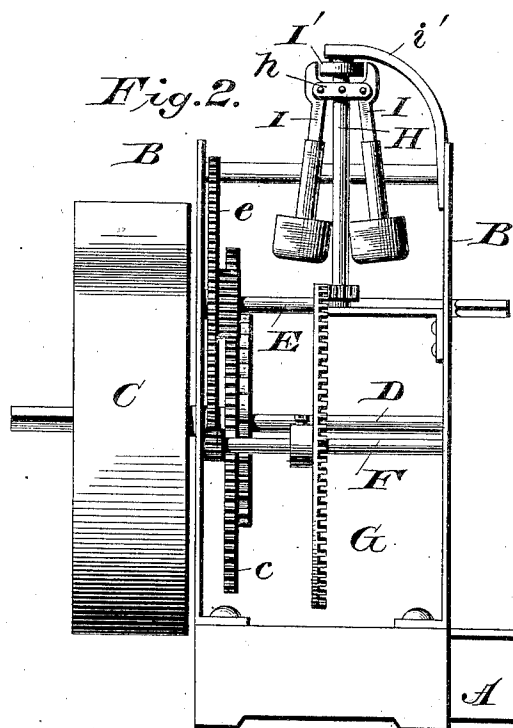
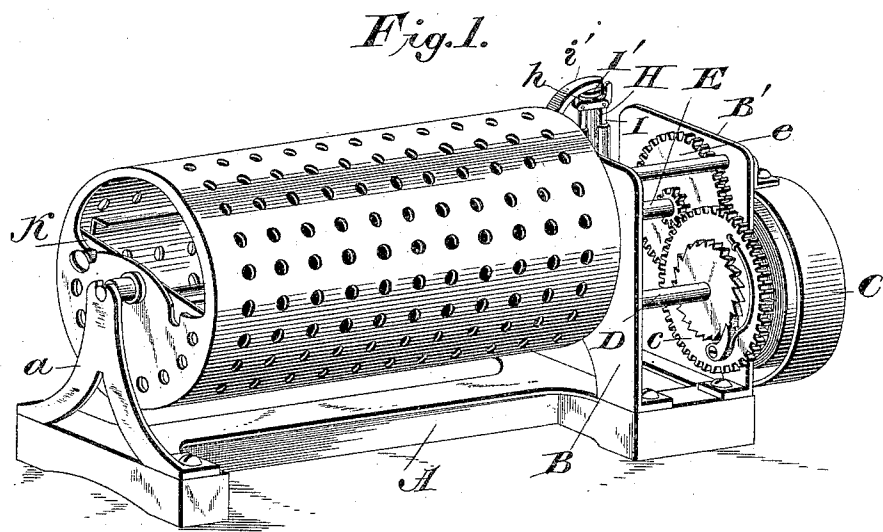


(No Model.)

E. W. MURPHY & W. D. MIXTER.
MOTOR FOR COFFEE ROASTERS.

No. 465,783.

Patented Dec. 22, 1891.



Witnesses
L. S. Elliott.
J. M. Johnson

Edward W. Murphy
and William D. Mixter,
Inventors,

by *[Signature]*
Attorney

UNITED STATES PATENT OFFICE.

EDWARD W. MURPHY AND WILLIAM D. MIXTER, OF ALBERT LEA, MINNESOTA, ASSIGNORS OF ONE-THIRD TO ADAM WEIGAND, OF SAME PLACE.

MOTOR FOR COFFEE-ROASTERS.

SPECIFICATION forming part of Letters Patent No. 465,783, dated December 22, 1891.

Application filed April 3, 1891. Serial No. 387,566. (No model.)

To all whom it may concern:

Be it known that we, EDWARD W. MURPHY and WILLIAM D. MIXTER, citizens of the United States of America, residing at Albert Lea, in the county of Freeborn and State of Minnesota, have invented certain new and useful Improvements in Motors for Coffee-Roasters; and we do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification.

This invention relates to certain new and useful improvements in coffee-roasters.

The object of the invention is to provide a spring-motor which is adapted to rotate a coffee-roaster or cylinder; and it consists in the construction and combination of the parts, as will be hereinafter fully set forth, and particularly pointed out in the claim.

In the accompanying drawings, forming part of this specification, Figure 1 is a perspective view of a spring-motor constructed in accordance with our invention, the same being shown as applied to a coffee-roaster; and Fig. 2 is a side elevation.

The parts comprising our spring-motor and coffee-roaster are all made of metal.

A refers to the base, which is made up of angle-iron, and is provided at one end with a standard *a*, the upper end of which is recessed to receive one of the journals of the roasting-cylinder. The opposite end of the frame is provided with two upright plates B and B', which are perforated to provide bearings for the shaft of a spring-motor, the spring thereof being inclosed within a casing C, through which the key-ended main driving-shaft passes. The main driving-shaft D has secured thereto beyond the plate B' the spring which is inclosed by the casing C, and the shaft carries the main driving-wheel *e* and a spring-pawl which engages with the ratchet-wheel. The main driving-wheel meshes with a pinion on the shaft E, adja-

cent to which is a gear-wheel *e*, and the end of said shaft E is squared and projects through the support B for engagement with the hub of the cylinder. A transverse shaft F, having near one end a pinion, is also mounted in the uprights B and B', and is driven by the gear-wheel *e*, so as to turn the crown-wheel G, which meshes with a pinion on the lower end of the vertical governor-shaft H. The governor-shaft H is provided near its upper end with horizontal bars *h*, between which are pivoted the weighted arms I, said arms being extended above their pivotal points, so that they may contact with the periphery of a flat disk or plate I', carried by the arm *i'*, said plate being recessed to provide a bearing for the upper end of the shaft. By this construction it will be observed that we provide the spring-motor with a frictional governor, the shaft of which governor is turned by the crown wheel and pinion, and when the motor runs at a high rate of speed the weighted arms will be thrown outwardly and their extended ends, contacting with the periphery of the disk, will retard the movement of the driving mechanism.

What we claim as new, and desire to secure by Letters Patent, is—

A spring-motor having a driving-shaft and a driven shaft for turning a cylinder, and a shaft geared to the driven shaft and provided with a crown-wheel which meshes with a pinion on the vertical governor-shaft, said governor-shaft carrying weighted arms with projecting ends which are adapted to engage with the periphery of a fixed disk, so that the speed of the spring-motor will be retarded by the frictional contact of the governor-arms with the periphery of the fixed disk, substantially as set forth.

In testimony whereof we affix our signatures in presence of two witnesses.

EDWARD W. MURPHY.
WILLIAM D. MIXTER.

Witnesses:

W. C. MITCHELL,
E. S. HAMMOND.